

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(magnetic and recording and perpendicular and soft and underlayer and loop and soft and perpendicular and Hc and Ho and coercivity and thickness).CLM.	US-PGPUB; USPAT	OR	ON	2006/03/30 15:34
L2	1	(covert\$ and plasma and electricity). clm.	US-PGPUB; USPAT	OR	ON	2006/03/30 15:38
L3	2	(converting and plasma and electricity)	US-PGPUB; USPAT	OR	ON	2006/03/30 15:38
L4	4	(360/135,136.ccls.) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer" and loop\$ and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/30 16:07
S1	1	"6132567"	USPAT	OR	OFF	2004/06/28 13:10
S2	16	"4632883"	USPAT	OR	OFF	2003/12/23 19:14
S3	10	"5616218"	USPAT	OR	OFF	2003/12/23 19:15
S4	1	"461834"	EPO	OR	OFF	2003/12/23 19:23
S5	6344	428/694\$ or "360"/\$ or "369"/\$	EPO	OR	OFF	2005/11/30 15:22
S6	195	(428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2005/06/23 15:32
S7	0	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and ("closed magnetic loop")	US-PGPUB; USPAT	OR	ON	2003/12/23 19:30
S8	0	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and ("closed magnetic loops")	US-PGPUB; USPAT	OR	ON	2003/12/23 19:30
S9	0	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and ("magnetic loop\$")	US-PGPUB; USPAT	OR	ON	2003/12/23 19:30
S10	62	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$	US-PGPUB; USPAT	OR	ON	2005/06/23 15:32

## EAST Search History

S11	53	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and (loop\$ same magnetic)	US-PGPUB; USPAT	OR	ON	2003/12/23 19:31
S12	9	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and (loop\$ same magnetic)) and (loop\$ same magnetic same clos\$)	US-PGPUB; USPAT	OR	ON	2003/12/23 19:35
S13	3	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and (loop\$ same magnetic)) and (loop\$ same magnetic same closed)	US-PGPUB; USPAT	OR	ON	2003/12/23 19:36
S14	57	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2005/11/30 15:39
S15	57	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and ("soft magnetic" with (underlayer or perpendicular))) and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2005/06/23 15:34
S16	5	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and ("soft magnetic" with (underlayer or perpendicular))) and ("soft magnetic" with (underlayer or perpendicular))) and ("soft magnetic" with nm with "NiFe")	US-PGPUB; USPAT	OR	ON	2005/06/23 15:35
S17	1	"6641934"	USPAT	OR	OFF	2004/06/28 17:08
S18	198	"closed magnetic loop"	USPAT	OR	OFF	2004/06/28 17:21
S19	23	"closed magnetic loop" and "magnetic recording"	USPAT	OR	OFF	2004/06/28 19:14
S20	1072	428/694t or 428/694tm	USPAT	OR	OFF	2004/06/28 19:18
S21	0	"perpendicular magnetic"/clm	USPAT	OR	OFF	2004/06/28 19:19

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S22	0	"perpendicular magnetic"/cm	US-PGPUB; USPAT	OR	OFF	2004/06/28 19:19
S23	0	"perpendicular magnetic"/cl	US-PGPUB; USPAT	OR	OFF	2004/06/28 19:19
S24	4215	"perpendicular magnetic"	US-PGPUB; USPAT	OR	OFF	2004/06/28 19:21
S25	1227	428/694T or 428/694TM	US-PGPUB; USPAT	OR	OFF	2005/06/23 15:31
S26	316	(428/694T or 428/694TM) and "perpendicular magnetic"	US-PGPUB; USPAT	OR	OFF	2004/06/28 22:13
S27	31	"5616218" OR "4632883"	US-PGPUB; USPAT	OR	OFF	2004/06/28 22:14
S28	0	"0461834"	EPO	OR	OFF	2004/06/28 22:14
S29	0	EPO0461834	EPO	OR	OFF	2004/06/28 22:15
S30	1	"461834"	EPO	OR	OFF	2004/06/28 22:15
S31	232	(perpendicular same magnetic same recording) and ((coercivity or "Hc" or "Ho") same maximum) and (thick or thickness)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 20:30
S32	98	S31 and (underlayer or "under layer") and (soft same magnetic)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 22:25
S33	8	S31 and "Kim"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 20:38
S34	72	S32 and (reduc\$ same thickness\$)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 20:41
S35	2	S33 and S34	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 20:38
S36	50	S34 and (thickness same perpendicular)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 20:42

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S37	232	(perpendicular same magnetic same recording) and ((coercivity or "Hc" or "Ho") same maximum) and (thick or thickness)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/23 15:35
S38	98	S37 and (underlayer or "under layer") and (soft same magnetic)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 22:25
S39	80	S38 and ((coercivity or "Hc" or "Ho") same (thick or thickness))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/21 22:26
S40	34	"349810" or "001218"	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2005/06/22 14:51
S41	8	Hiroataka and Shinzo	US-PGPUB; USPAT; EPO; DERWENT	OR	OFF	2005/06/22 14:51
S42	985	428/694T or 428/694TM	US-PGPUB; USPAT	OR	OFF	2005/06/23 15:42
S43	296	(428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2005/11/30 15:46
S44	115	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$	US-PGPUB; USPAT	OR	ON	2005/06/23 15:32
S45	169	(((((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and ("soft magnetic" with (underlayer or perpendicular))) and ("soft magnetic" with (underlayer or perpendicular)))	US-PGPUB; USPAT	OR	ON	2005/06/23 15:35

## EAST Search History

S46	13	(((((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and ("soft magnetic" with (underlayer or perpendicular))) and ("soft magnetic" with (underlayer or perpendicular))) and ("soft magnetic" with nm with "NiFe"))	US-PGPUB; USPAT	OR	ON	2005/06/23 15:35
S47	232	(perpendicular same magnetic same recording) and ((coercivity or "Hc" or "Ho") same maximum) and (thick or thickness)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/23 16:23
S48	2094	427/131 or 427/313	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/30 14:49
S49	278	360/327.\$	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/11/30 15:23
S50	10200	428/64.\$ or 428/65.5 or 428/611 or 428/336 or 428/693	US-PGPUB; USPAT	OR	OFF	2005/11/30 15:22
S51	0	"20050142385"	US-PGPUB; USPAT	OR	OFF	2005/06/23 16:15
S52	1	"20050123805"	US-PGPUB; USPAT	OR	OFF	2005/06/23 16:23
S53	1092	204/192.2	US-PGPUB; USPAT	OR	OFF	2005/06/23 16:23
S54	80	(S53 or S42 or S43 or S44 or S49) and (perpendicular same magnetic same recording) and ((coercivity or "Hc" or "Ho") same maximum) and (thick or thickness)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/23 16:36
S55	1	11-023256	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/23 16:47
S56	1	"20050136290"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/23 16:50

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S57	1	"20050118460"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/06/23 16:53
S58	0	"0050123806"	US-PGPUB	OR	ON	2005/06/23 16:54
S59	0	"0050123806"	US-PGPUB; USPAT	OR	ON	2005/06/23 16:54
S60	1	"20050129985"	US-PGPUB; USPAT	OR	ON	2005/06/23 16:54
S61	1	"20030157378"	US-PGPUB	OR	OFF	2005/06/23 21:08
S62	1	"20040121194"	US-PGPUB	OR	OFF	2005/06/23 21:10
S63	1	"20030190498"	US-PGPUB	OR	OFF	2005/06/23 21:12
S64	1	"20050118462"	US-PGPUB	OR	OFF	2005/06/23 21:13
S65	1	"20050084719"	US-PGPUB	OR	OFF	2005/06/23 21:13
S66	10528	428/64.\$ or 428/65.5 or 428/611 or 428/336 or 428/693	US-PGPUB; USPAT	OR	ON	2006/03/30 14:52
S67	303	360/327.\$	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/11/30 15:23
S68	97693	428/694\$ or "360"/\$ or "369"/\$	US-PGPUB; USPAT	OR	OFF	2005/11/30 15:23
S69	184	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$) and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2006/03/30 14:09
S70	241	428/829.CCLS. or 428/830.ccls. or 428/832.ccls. or 428/832.2.ccls	US-PGPUB; USPAT	OR	ON	2005/11/30 15:41
S71	13	S70 and ("perpendicular magnetic") and ("soft magnetic") and ("underlayer") and (loop\$) and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2006/03/30 14:09
S72	16	(428/694\$ or 369/13.\$ or "360"/("131, 135,136")).ccls. and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2006/03/30 14:08
S73	17	("428"/("900","668")).ccls. and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2006/03/30 14:08

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S74	32	("360"/("327.2","313","327.22","327.23","327.3") or (204/192.2)).ccls. and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2006/03/30 14:08
S75	1	"20040219392"	US-PGPUB; USPAT	OR	ON	2005/11/30 16:00
S76	1	"20040038082"	US-PGPUB; EPO	OR	OFF	2005/12/01 23:15
S77	33	("360"/("327.2","313","327.22","327.23","327.3") or (204/192.2)).ccls. and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2006/03/30 14:08
S78	17	("428"/("900","668")).ccls. and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2006/03/30 14:08
S79	17	(428/694\$ or 369/13.\$ or "360"/("131,135,136")).ccls. and ("perpendicular magnetic") and ("soft magnetic") and "underlayer"	US-PGPUB; USPAT	OR	ON	2006/03/30 14:08
S80	19	(428/829.CCLS. or 428/830.ccls. or 428/832.ccls. or 428/832.2.ccls.) and ("perpendicular magnetic") and ("soft magnetic") and ("underlayer") and (loop\$) and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2006/03/30 14:09
S81	120	((428/694\$ or 369/13.\$ or "360"/("131,135,136")) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer") and loop\$ and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2006/03/30 14:09
S82	8	(427/131.ccls. or 427/313.ccls.) and ("perpendicular magnetic") and ("soft magnetic") and "underlayer" and loop\$ and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/03/30 16:06
S83	25	((428/64.\$ or 428/65.5 or 428/611 or 428/336 or 428/693).ccls.)and ("perpendicular magnetic") and ("soft magnetic") and "underlayer" and loop\$ and ("soft magnetic" with (underlayer or perpendicular))	US-PGPUB; USPAT	OR	ON	2006/03/30 15:04

# Interference Search Printed

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	0	(magnetic and recording and perpendicular and soft and underlayer and loop and soft and perpendicular and Hc and Ho and coercivity and thickness).CLM.	US-PGPUB; USPAT	OR	ON	2006/03/30 15:09